REMARKS

The present amendment is in response to the Office Action dated May 16, 2005, where the Examiner rejected claims 1-19. Claims 1-19 were rejected to 35 USC 102 grounds and 35 USC 103 grounds. Additionally, the Detailed Action identified informalities to the Specification.

By the present amendment, the comments in the Specification and the Claim Objections in the Detailed Action are addressed.

A. Specification

In the previous responsive communication, the Applicant proposed a title for the invention. The Examiner provided no response to Applicant's proposed title. In view of recent claim amendments, the Applicant proposes the following title: "MINIMIZING THE LOSS OF BARRIER MATERIALS DURING PHOTORESIST STRIPPING WITH A GAS MIXTURE COMPRISING CARBON MONOXIDE." The Applicant respectfully requests instruction regarding this title.

B. Claim Rejections – 35 USC § 102

The Examiner has rejected all claims under 35 USC 102(e) as being anticipated by Chooi et al. (Chooi), U.S. Patent 6,465,888 hereinafter referred to as "Chooi '888." In light of the currently amended claims, the Applicant respectfully disagrees with this conclusion.

The Federal Circuit stated in W.L. Gore & Associates v. Garlock, Inc., "anticipation requires the disclosure in single prior art reference of each element of the

claim under consideration." W.L. Gore & Associates v. Garlock, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

Amended independent claims 1, 9 and 15 reflect the addition of a substantive limitation that comprises selectively removing the photoresist layer with the first gas mixture, which comprises carbon monoxide (CO), with little or no etching of the exposed barrier layer. Support for the etching is provided throughout the specification including *inter alia* the flowchart in FIG. 2 at blocks 204 and 214 and Page 12, lines 1-15.

Applicant has reviewed the description of Chooi '888, which teaches removing the photoresist layer by "oxygen plasma ashing." See col. 8, lines 11–12 and Examiner's comment on Page 3 of the Examiner's Office Action.

Chooi '888 clearly identifies a two-step process that distinguishes between the first step of etching optional organic BARC, the dielectric, and the optional stop-etch layer, and the second step being the removal of the photoresist layer. With respect to the photoresist layer, the Chooi '888 embodiment only teaches photoresist removal using an oxygen plasma.

Here, the Applicant's amended claims teach a two-step process, in which the dielectric is first etched and the barrier layer is exposed and secondly the photoresist is removed with carbon monoxide (CO).

As amended, Chooi '888 fails to satisfy the 35 USC 102 anticipation standard because Chooi '888 fails to teach of each element of the amended independent claims. More particularly, Chooi '888 fails to teach the use of CO to remove the photoresist when the dielectric has been previously etched, which results in the selective removal of the photoresist layer with little or no removal of the barrier layer.

Thus, the Applicant respectfully submits that with respect to amended independent claims 1, 9 and 15, each of these amended claims overcomes the 35 USC 102 rejection. Since the remaining dependent claims depend on each of these independent claims, the Applicant submits these dependent claims also overcome the 102 rejection.

In spite of not presenting an argument for each dependent claim, the Applicant reserves the right to respond to these objections at a later time. The Applicant respectfully submits that Applicant's rights are not prejudiced by failing to respond to the objections presented for each of the dependent claims identified above. Should the Examiner require a response to each of the dependent claims in view of the arguments propounded for each independent claim, Applicant respectfully requests such instruction.

C. Claim Rejections – 35 USC § 103

The Examiner has rejected claims 1 - 19 as being unpatentable over Han et al., U.S. Patent No. 6,352,921 (hereinafter "Han '921") in view of Chooi et al., U.S. Patent No. 6,465,888 (hereinafter "Chooi '888"). In view of the currently amended claims, the Applicant respectfully disagrees with this rejection and provides arguments to overcome this rejection below.

The Examiner starts his arguments by referring to Han '921 and arguing that Han '921 teaches feeding a carbon monoxide gas for selectively removing the photoresist layer with little or no etching of the exposed barrier layer. See Page 5 of Office Action. The Examiner's Arguments at Page 5 of the Office Action appear to be directed to independent claims 1, 9, and 15.

The Examiner references col. 6, lines 61 – 67 of Han '921 for supporting the Examiner's position regarding the removal of the photoresist layer with little or no etching of the exposed barrier layer. See Page 5 of Office Action. However, as the claims have been currently amended, the Applicant claims selectively removing the photoresist layer with the first gas mixture that comprises carbon monoxide (CO) with little or no etching of the exposed barrier layer.

The amended independent claims 1, 9, and 15 overcome the Examiner's rejection because the amended claims teach a two-step process, in which the dielectric is first etched, and secondly the photoresist layer is removed with a carbon monoxide (CO) gas mixture. Further still, the Applicant claims the selective removal of the photoresist layer with little or no removal of the barrier layer.

As stated in Section 2143 of the MPEP:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references (or references when combined) must teach or suggest all the claim limitations.
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> The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure. Section 2143, MPEP Rev. 2.0, May 2004, pg. 2100-129.

Han '921 and Chooi '888 fail to satisfy the 35 USC 103 obviousness standard because both patents fail to teach each element of the amended independent claims, namely the use of carbon monoxide (CO) to remove the photoresist when the dielectric has been previously etched to expose the barrier layer, which results in the selective removal of the photoresist layer with little or no removal of the barrier layer.

Additionally, in Han '921 and Chooi '888 there is no motivation to combine these references to provide using carbon monoxide (CO) to remove the photoresist when the dielectric has been previously etched to the barrier layer, which results in the selective removal of the photoresist layer with little or no removal of the barrier layer.

Finally, in Han '921 and Chooi '888 there is no suggestion of success in using carbon monoxide (CO) to remove the photoresist when the dielectric has been previously etched to the barrier layer.

In addition, Graham v. John Deere, 383 U.S. 1, 148 USPQ 459 (1966) held that secondary considerations may be utilized to support an indicia of non-obviousness including unexpected results. Here, the unexpected result is the selective removal of the photoresist layer with a gas mixture comprising carbon monoxide (CO) with little or no etching of the exposed barrier layer. Neither Han '921 nor Choo '888 teach or suggest these results.

Thus, the Applicant submits that independent claims 1, 9 and 15 are in a state of allowance.

Regarding the remaining dependent claims, the Applicant contends these dependent claims should also be found to be in a state of allowance because they depend on independent claims 1, 9 and 15. The Applicant respectfully reserves the right to argue the merits of these dependent claims at a later time.

D. Conclusion

For all the foregoing reasons, allowance of claims 1-19 pending in the present application is respectfully requested.

Respectfully Submitted;

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